

IX. APPENDIX - CLAIMS ON APPEAL

1. Apparatus for forming heated glass sheets comprising:
 - a housing having a heated chamber;
 - an upper mold support assembly for supporting an upper mold within the heated chamber for cyclical vertical movement between upper and lower positions;
 - a lower mold shuttle for supporting a lower mold for cyclical movement between an idle position horizontally spaced from the upper mold and a use position below the upper mold; and
 - a lower mold support assembly to which the lower mold is cyclically transferred from the lower mold shuttle in the use position to provide support thereof while permitting horizontal alignment of the lower mold with the upper mold as necessary upon each cycle of downward movement of the upper mold for cooperation of the molds to form a heated glass sheet between the molds.
5. Apparatus for forming glass sheets as in claim 1 wherein the lower mold support assembly includes four lower supports that support the lower mold in the use position below the upper mold.
13. Apparatus for forming glass sheets as in claim 1 further including a quench station including lower and upper quench modules for supplying a quench gas, and a quench shuttle that supports and cyclically moves a quench ring between: (a) a transfer position below the upper mold in the heated chamber where the quench ring is movable horizontally on the quench shuttle as necessary into alignment with the upper mold upon downward movement of the upper mold to deposit a formed glass sheet supported thereby onto the quench ring; and (b) a quench position between the lower and upper quench modules to provide quenching of the formed glass sheet on the quench ring.

15. Apparatus for forming glass sheets as in claim 13 wherein the quench station includes a railway having a pair of spaced rails, the quench shuttle including a pair of spaced shuttle members having supported ends that are respectively supported by the pair of spaced rails for the movement of the quench shuttle; and the pair of spaced shuttle members including a pair of cantilevered ends that support the quench ring in a spaced and otherwise unconnected relationship.

16. Apparatus for forming glass sheets comprising:

a housing having a heated chamber;

an upper mold supported within the heated chamber for cyclical vertical movement between an upper position and a lower position;

a lower mold for cooperating with the upper mold to provide forming of a heated glass sheet;

a lower mold shuttle that supports the lower mold for cyclical movement between an idle position horizontally spaced from the upper mold and a use position below the upper mold;

a lower mold support assembly to which the lower mold is cyclically transferred from the lower mold shuttle in the use position to provide support thereof while permitting horizontal movement of the lower mold on the lower mold shuttle;

alignment guides that cooperate to move the lower mold horizontally on the lower mold support assembly as necessary into alignment with the upper mold upon each cycle of downward movement of the upper mold to the lower position to provide the glass sheet forming; and

a quench station including lower and upper quench modules for supplying a quench gas, and a quench shuttle that supports and cyclically moves a quench ring between: (a) a transfer position below the upper mold in the heated chamber where the quench ring is movable horizontally on the quench shuttle as necessary into alignment with the upper mold upon downward movement of the upper mold to deposit a formed glass sheet supported thereby

onto the quench ring; and (b) a quench position between the lower and upper quench modules to provide quenching of the formed glass sheet on the quench ring.